Project: DZ60RGB_v2

Date Created: 1/7/2021

Goal: To create my first custom mechanical keyboard from scratch using Solidworks.

About the Project: The DZ60RGB v2 is a hotswap pcb from KBDfans that is the main component of the keyboard. Using a caliper, I measured out the dimensions of the pcb to model into Solidworks as a basis of creating the keyboard. After modeling, I designed the outer case along with a keyboard plate that was used to hold the components together. Once, the drawing was finished, I was able to get the pieces of the keyboard manufactured. The finished product is a 65% keyboard layout with a stainless steel case and Zealios V2 switches.

Images:

Figure 1. Inspiration: Taeha Types Keycult No.2/65

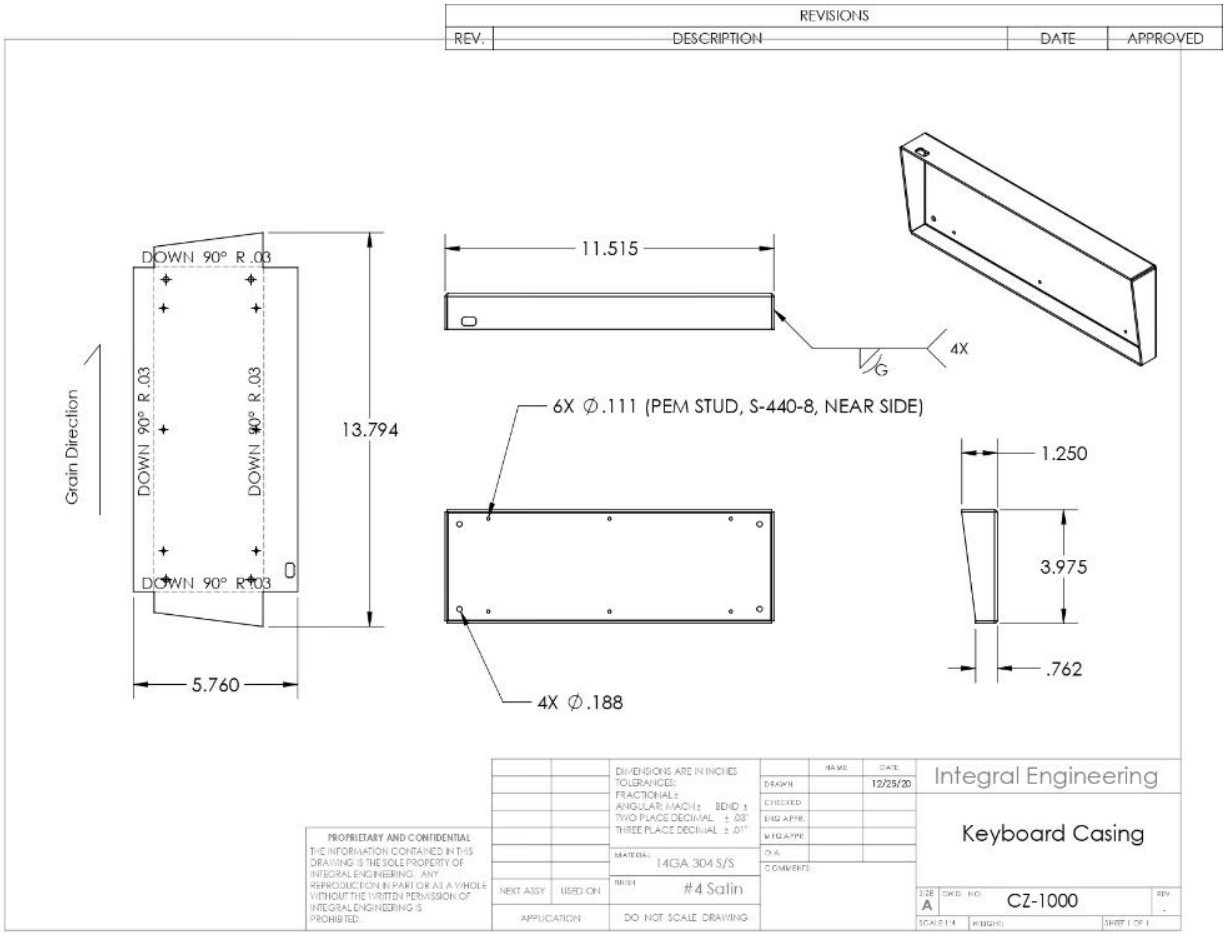

Figure 2. 2D CAD drawing for CZ-1000 (Keyboard Casing).

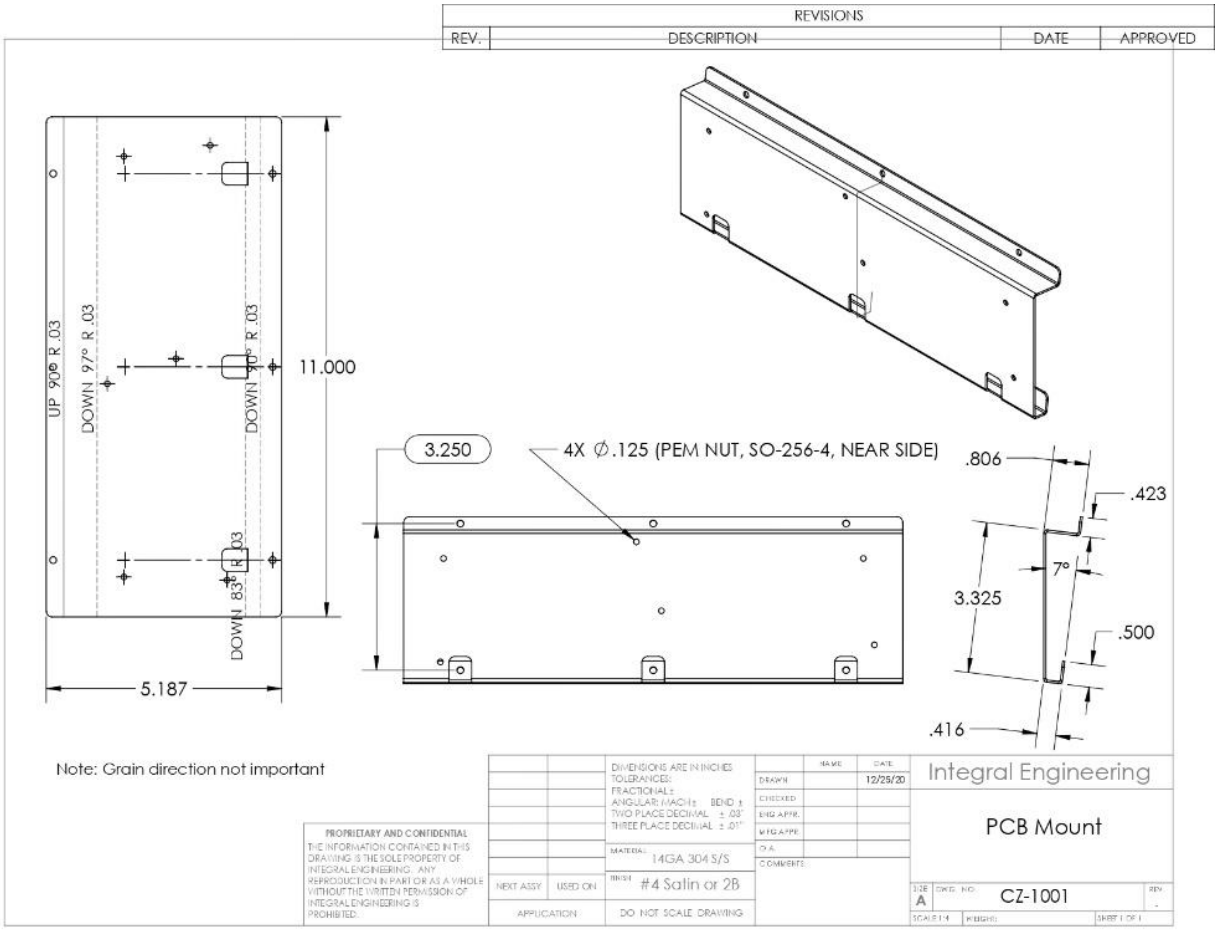

Figure 3. 2D CAD drawing for CZ-1001 (PCB Mount).

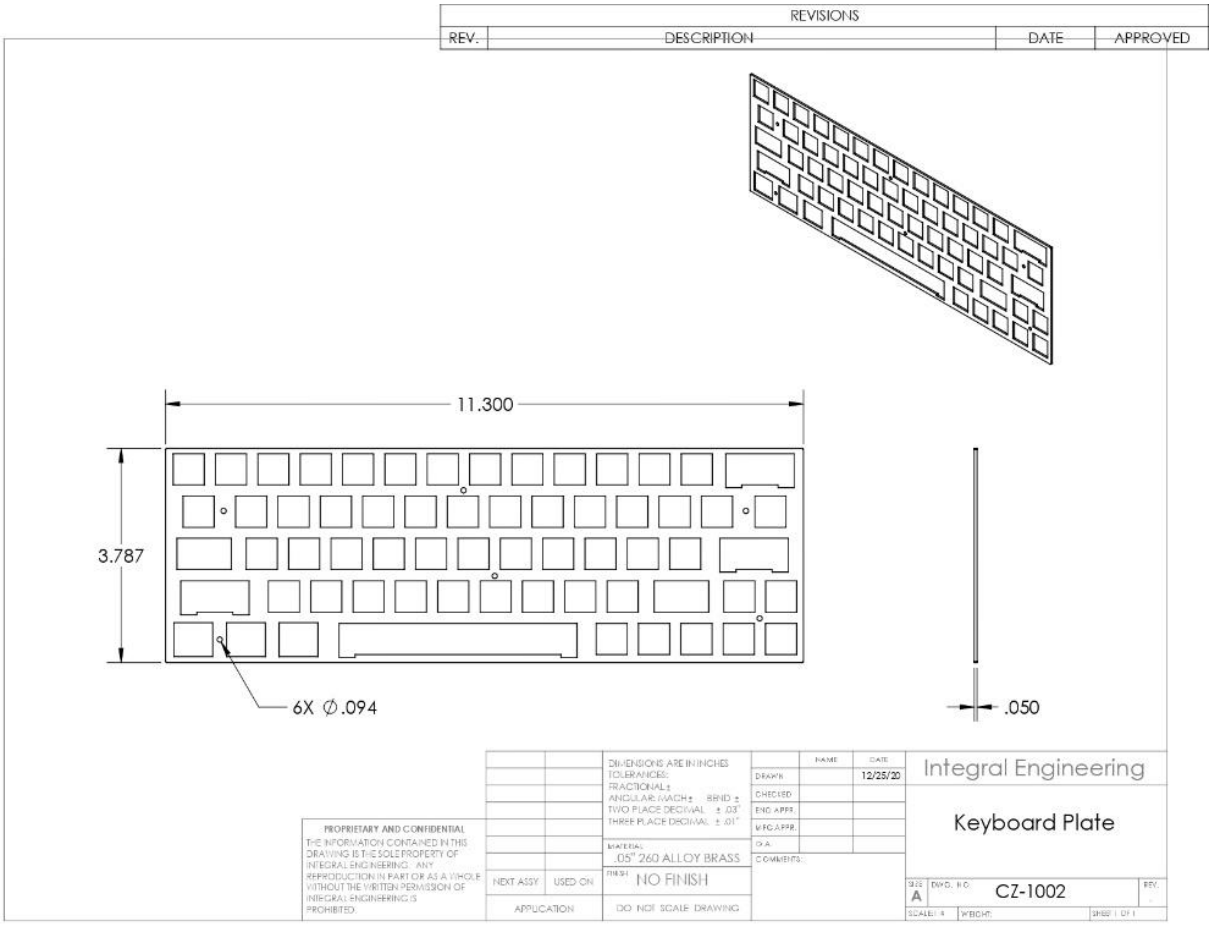

Figure 4. 2D CAD drawing for CZ-1002 (Keyboard Plate).

Figure 5. **DZRGB60v2** Polished #8 mirror finish on 14GA 304 Stainless Steel.

Figure 6. **DZRGB60v2** Side profile. Showing off the polished stainless steel finish.

Figure 7. **DZRGB60v2** T009-WH12 Cardinal Powder Coatings with semigloss finish on 14GA 304 Stainless Steel.

Figure 8. **DZRGB60v2** Back view of the keyboard casing.

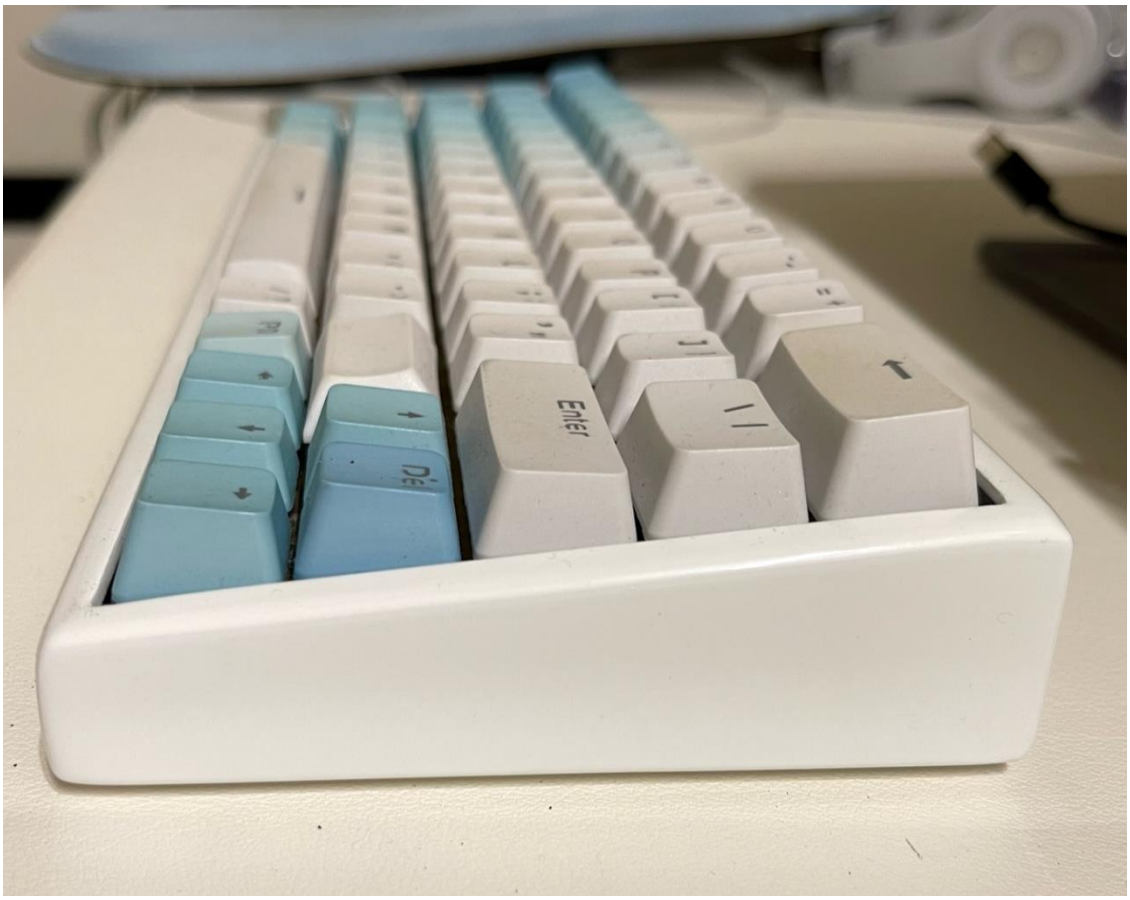

Figure 9. **DZRGB60v2** Side profile.

Figure 10. **DZRGB60v2** top view.

Figure 11. **DZRGB60v2** typing.

What was learned:

- Using a caliper
- Solidworks/AutoCAD

- Mechanical Keyboard components
- PCBs
- Designing & manufacturing a product
- VIA software
- QMK software
- Engineering communication skills

This project was a learning experience in my engineering career because it taught me the basics of effective engineering communication skills, designing & manufacturing a product, and using Solidworks. By learning basic measurements, engineering problem solving, and project management, I was able to put together